

 AIR RESOURCES BOARD	ISUZU MOTORS LIMITED	EXECUTIVE ORDER U-R-006-0194 New Off-Road Compression-Ignition Engines
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Pursuant to the authority vested in the Air Resources Board by Sections 43013, 43018, 43101, 43102, 43104 and 43105 of the Health and Safety Code; and

Pursuant to the authority vested in the undersigned by Sections 39515 and 39516 of the Health and Safety Code and Executive Order G-02-003;

IT IS ORDERED AND RESOLVED: That the following compression-ignition engines and emission control systems produced by the manufacturer are certified as described below for use in off-road equipment. Production engines shall be in all material respects the same as those for which certification is granted.

MODEL YEAR	ENGINE FAMILY	DISPLACEMENT (liters)	FUEL TYPE	USEFUL LIFE (hours)
2005	5SZXL01.5DNB	1.5	Diesel	5000
SPECIAL FEATURES & EMISSION CONTROL SYSTEMS			TYPICAL EQUIPMENT APPLICATION	
Indirect Diesel Injection			Loader, Pump, Compressor, Generator Set, Other Industrial Equipment	

The engine models and codes are attached.

The following are the exhaust certification standards (STD) and certification levels (CERT) for hydrocarbon (HC), oxides of nitrogen (NO_x), or non-methane hydrocarbon plus oxides of nitrogen (NMHC+NO_x), carbon monoxide (CO), and particulate matter (PM) in grams per kilowatt-hour (g/kW-hr), and the opacity-of-smoke certification standards and certification levels in percent (%) during acceleration (Accel), lugging (Lug), and the peak value from either mode (Peak) for this engine family (Title 13, California Code of Regulations, (13 CCR) Section 2423):

RATED POWER CLASS	EMISSION STANDARD CATEGORY		EXHAUST (g/kW-hr)					OPACITY (%)		
			HC	NO _x	NMHC+NO _x	CO	PM	ACCEL	LUG	PEAK
19 ≤ kW < 37	Tier 2	STD	N/A	N/A	7.5	5.5	0.60	20	15	50
		CERT	--	--	4.7	1.5	0.41	7	10	17

BE IT FURTHER RESOLVED: That for the listed engine models, the manufacturer has submitted the information and materials to demonstrate certification compliance with 13 CCR Section 2424 (emission control labels), and 13 CCR Sections 2425 and 2426 (emission control system warranty).

Engines certified under this Executive Order must conform to all applicable California emission regulations.

This Executive Order is only granted to the engine family and model-year listed above. Engines in this family that are produced for any other model-year are not covered by this Executive Order.

Executed at El Monte, California on this 29TH day of November 2004.



Allen Lyons, Chief
Mobile Source Operations Division

Manufacturer: Isuzu Motors Limited
 Engine category: Nonroad CI
 EPA Engine Family: 5SZXL01.5DNB
 Mfr Family Name: NA
 Process Code: New Submission

ATTACHMENT

U-R-006-0194

1.Engine Code	2.Engine Model	3.BHP @RPM (SAE Gross)	4.Fuel Rate: mm/stroke @ peak HP (for diesel only)	5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	6.Torque @ RPM (SEA Gross)	7.Fuel Rate: mm/stroke @ peak torque	8.Fuel Rate: (lbs/hr) @ peak torque	9.Emission Control Device Per SAE J1930
3LD1NABDA-01	3LD1	25.5@2100	31.7@2100	11.1@2100	67.9@1700	33.7@1700	9.5@1700	EM,IDI
3LD1NABDA-02	3LD1	26.0@2200	30.1@2200	11.0@2200	69.3@1800	34.5@1800	10.3@1800	EM,IDI
3LD1NABDA-03	3LD1	27.0@2300	30.1@2300	11.5@2300	69.3@1800	34.5@1800	10.3@1800	EM,IDI
3LD1NABDA-04	3LD1	27.8@2400	30.1@2400	12.0@2400	69.3@1800	34.5@1800	10.3@1800	EM,IDI
3LD1NABDA-05	3LD1	27.6@2450	29.7@2450	12.1@2450	67.0@1800	34.1@1800	10.2@1800	EM,IDI
3LD1NABDA-06	3LD1	29.6@2600	28.3@2600	12.3@2600	69.3@1800	34.5@1800	10.3@1800	EM,IDI
3LD1NABDA-07	3LD1	31.7@2700	31.3@2700	14.1@2700	69.0@2000	33.7@2000	11.2@2000	EM,IDI
3LD1NABDA-08	3LD1	30.9@2800	31.1@2800	14.5@2800	69.1@2000	33.7@2000	11.2@2000	EM,IDI
3LD1NABDA-11	3LD1	33.5@3000	34.0@3000	17.0@3000	70.1@1800	38.5@1800	11.6@1800	EM,IDI